Parenting Stress and Abuse Potential in Mothers of Children with Developmental Disabilities

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Abstract:

Most research on parenting stress and abuse factors in parents of children with developmental disabilities has relied almost exclusively on Caucasian, middle-income, intact families. The current study investigated the generalizability of previous findings, examining the relations among parenting stress, abuse potential, and child's intellectual/adaptive functioning in a sample of low-income African American mothers of children with developmental delays. Thirty-three maternal caregivers completed the Child Abuse Potential Inventory and the Parenting Stress Index. Results indicated significant parenting stress, particularly aspects related to the child, as well as considerable physical abuse potential. Parenting stress was strongly correlated with abuse potential, particularly stress related to parental attributes. Neither parenting stress nor abuse potential were significantly correlated with the child's intellectual or adaptive functioning. Concerns regarding the appropriateness of these measures with this population and the need for controlled studies are discussed.

Article:

As the mechanisms that contribute to child mal-treatment undergo increasing research scrutiny, specific at-risk populations have been targeted for study. Several literature reviews report an elevated incidence of abuse and neglect in children with disabilities (Ammerman, Van Hasselt, & Hersen, 1988; Starr, Dietrich, Fischhoff, Ceresnie, & Zweier, 1984; Westcott, 1991), although estimates vary widely, largely because of methodological differences. Minimal research with the disability population has examined potential for physical abuse in unidentified perpetrators, Reliance on imperfect reporting and investigatory procedures to detect abuse may lead to distorted estimates of the incidence of maltreatment in children with disabilities because of numerous biases in such procedures.

The rationale for studying the potential for abuse in "normal" or "high-risk" parents stems from the belief that the potential to physically abuse children lies on a continuum, with such parents providing valuable insights that may apply to their peers further along the risk continuum. One study that did investigate the potential for physical maltreatment in mothers of children with disabilities found risk scores comparable to the normative sample (Kirkham, Schinke, Schilling, Meltzer, & Nerelius, 1986), leading some to question whether children with disabilities are indeed at risk for abuse.

Children with disabilities are generally regarded as at risk for abuse and neglect theoretically because of such factors as early separation and disrupted attachment and disappointment, as well as increased care-taking demands and stress (Ammerman et al., 1988). Characteristics of the child, such as increasing age, type of disability, unusual care-giving demands, and difficult behavior, may exacerbate stress (Gallagher, Beckman, & Cross, 1983). Some have suggested that the degree of disability may also influence parental response (Westcott, 1991). Parental expectations and beliefs as well as contextual factors, such as social support networks, marital status, and income (Gallagher et al., 1983) may also affect parental behavior toward a child with disabilities.

Parenting stress has been consistently linked with abusive parenting behaviors in various populations (Chan, 1994; Webster-Stratton, 1988). Webster-Stratton (1990) highlights the need to conceptualize stress in broad terms and to incorporate several contributing factors (e.g,, marital conflict, isolation, health concerns). This point addresses the intrinsic problem in considering individual stressors in isolation from others. Stress arising

from the parent-child interaction, including parent- as well as child-related factors, has also correlated with physical child abuse potential (Talbott, cited in Milner, 1986).

High parenting stress appears especially prevalent in parents of children with disabilities. Compared to a matched sample of parents of a child without disabilities, parents of children with disabilities obtained significantly higher parenting stress scores; these higher scores involved stress associated with both parent- and child-related characteristics, with mothers of children with disabilities attaining mean scores at about the 90th percentile (Beckman, 1991), Several studies have found that parenting stress in this population appears in particular to involve child-related, rather than parent-related characteristics (Boyce, Behl, Mortensen, & Alcers, 1991; Cameron, Dobson, & Day, 1991; McKinney & Peterson, 1987; Noh, Dumas, Wolf, & Fisman, 1989).

Some researchers suggest that high parenting stress would not place children with disabilities at risk for maltreatment. A study of mothers of children with disabilities found that stress did not account for significant variance in child abuse potential scores (Kirkham et al., 1986). Moreover, families of children with multiple disabilities who had a history of substantiated abuse were compared to nonreported families who had children with disabilities, and no significant differences were found in current stress between the groups (Benedict, Wulff, & White, 1992), Another study reported mean stress scores, both parent- and child-related aspects, comparable to the normative sample (Krauss, 1993). Such findings reflect several authors' interpretation that despite significant stressors, families of children with disabilities adapt and accommodate without significant impact on family functioning (Gallimore, Weisner, Bernheimer, Guthrie, & Nihira, 1993; Kazak & Marvin, 1984; Saddler, Hillman, & Benjamins, 1993).

However, research on stress and child-abuse-related factors in parents of children with disabilities has relied almost exclusively on homogeneous samples of Caucasian, middle-income, intact families. Several studies neglected to report the ethnic composition of their study samples, apparently not considering race a pertinent issue (Cameron et al., 1991; Kazak & Marvin, 1984; Krauss, 1993), Many studies report predominantly or entirely Caucasian samples (Beckman, 1983, 1991; Boyce et al., 1991; Dyson, 1991, 1993; Kirkham et al., 1986; McKinney & Peterson, 1987), In addition, those studies reporting the socioeconomic status of their samples describe their samples as middle income or above (e.g., Beckman, 1983, 1991; Dyson, 1991, 1993; Gallimore et al., 1993; Saddler et al., 1993). Moreover, studies primarily involve families with two parents present (e.g., Beckman, 1983, 1991; McKinney & Peterson, 1987; Dyson, 1991, 1993; Gallimore et al., 1993; Krauss, 1993; Saddler et al., 1993), Some of these authors acknowledge the limitations of interpreting findings due to their sample characteristics (Beckman, 1991; Boyce et al., 1991; Dyson, 1991, 1993).

Understandably, stress in parents of children with disabilities is likely to be intensified by such factors as low socioeconomic status and single-parent status (see Gallagher et al., 1983, for discussion). Indeed, the relationships among stress, socioeconomic status, and family composition may be particularly relevant for families raising children with disabilities. Various environmental factors may contribute to developmental delay, including such variables as poverty and unemployment, single or teenaged parenting, limited parental education, and parental mental health (Bernstein, Hans, & Percansky, 1991; Roth, 1982), Abuse reporting is higher for individuals who are unmarried, unemployed, poorly educated, and with low incomes (Benedict, White, Wulff, & Hall, 1990). A group of parents of children with disabilities reported for maltreatment typically included individuals who were unmarried, had less education, and were more frequently African American (Benedict et al., 1990, Benedict et al., 1992). Another study of predominantly Caucasian mothers reported that single mothers of children with disabilities obtained higher child abuse potential scores than married mothers (Kirkham et al., 1986). Mothers raising children with disabilities on their own also report higher stress than those in two-parent homes (Quine & Pahl, 1985). One study has made an effort to confront some of these issues, exploring stress and family functioning in low-income Mexican mothers of children with physical disabilities (Shapiro & Tittle, 1986). Yet, some studies have concluded that parents raising children with disabilities may not experience higher parenting stress (Krauss, 1993), that stress is unrelated to abuse potential (Kirkham et al., 1986), and that these families adjust despite stressors (Gallimore et al., 1993). Before such

interpretations can be offered, more research clearly needs to involve projects with individuals more likely to encounter the stressors that complicate raising a child with disabilities.

Because the applicability of prior findings to low-income African American families is unclear, the purpose of the current study was to examine the parenting stress and child abuse potential in a sample of low-income African American mothers of children with developmental disabilities. The relations of child and family characteristics with stress and abuse potential were also investigated.

METHOD

Participants

Participants were 33 African American maternal caregivers of children referred for diagnostic evaluation at an urban, university-affiliated, developmental disability center. The disability center typically serves low-income urban minorities. All participants were low income, qualifying for at least one form of government financial assistance. Twenty-four caregivers in the sample identified themselves as biological mothers, 6 as grandmothers, and 3 as other relatives or foster parents. Caregivers' ages ranged from 20 to 75 years (M = 36.1, *Mdn* = 33.1, *SD* = 12.8). With regard to family composition, the sample consisted of predominantly single-parent households (n = 24), with only 9 mothers reporting 2 caregivers available in the home (4 with mothers and fathers, the remainder with 2 grand-parents or 2 other relatives). Maternal educational attainment ranged from 5 to 16 years of schooling, with 81% reporting high school education or less.

Children's ages ranged from 2 to 14 years *(M* = 6.1, *SD* = 2.7), and 20 of the children were male. Based on comprehensive evaluations, all children in the study received a diagnosis of developmental disability according to criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) or the *International Classification of Diseases and Related Problems* (World Health Organization, 1993). The majority of children were diagnosed with borderline intellectual functioning (n = 13), with the remainder diagnosed with mild mental retardation (n = 8), mixed developmental disorder (n = 6), moderate mental retardation (n = 2), and communication disorders (n = 4). In addition to developmental delays, 17 children received comorbid diagnoses for behavioral or emotional disorders; 8 were diagnosed with attention deficit hyperactivity disorder, 4 with dysthymia, and 5 with other diagnoses (oppositional defiant disorder, posttraumatic stress disorder).

Measures

The Child Abuse Potential Inventory (CAPI; Milner, 1986) is a self-report measure designed to identify individuals at risk of physical abuse, presenting 160 statements with which participants agree or disagree. Only 77 of these items contribute to the Abuse scale score. The remaining items serve either as fillers or provide a means of detecting biases in responding. Three validity scales designed to measure biases, such as lying, inconsistency, and random patterns of responding, combine to yield three indices: faking-good, faking-bad, and random response. The read-ability of the CAPI is estimated at Grade 3.

Strong internal consistency and test-retest reliabilities for the CAPI are reported in the manual (Milner, 1986). Since its initial development, several studies suggest that the CAN demonstrates reasonable accuracy in classifying abusive parents (Milner, Gold, & Wimberley, 1986). Attained Abuse scale scores are compared to a control group of 836 parents, with sample characteristics reported as a mean educational level of 14 years, 76% married subjects, and 13% African Americans (Milner, 1986).

The Parenting Stress Index (PSI; Abidin, 1990) consists of 101 items with a 5-point Likert-type scale in which respondents judge the extent to which they agree with the statements presented. Abidin (1990) based the PSI on the assumption that parenting stressors could arise from either parent or child factors, thus providing parent domain and child domain scores, as well as a total combined score. The PSI is reportedly readable to parents with a fifth-grade education. Two caregivers were unable to complete the PSI parent domain portion due to time constraints.

The PSI normative group of 2,633 parents is described as 11% African American, 27% in the lowest two categories of family income, 77% married, and 50% with 12 years of education or less (Abidin, 1990). High internal consistency and adequate test-retest reliability for the PSI have been reported (Abidin, 1990).

Child's developmental functioning was assessed with measures of adaptive and intellectual functioning. The Vineland Adaptive Behavior Scales, Interview Edition Survey Form (Sparrow, Balla, & Cicchetti, 1984) was administered to 32 maternal caregivers. As part of the evaluation for developmental delay, a cognitive assessment appropriate to the child's developmental level was conducted: the Stanford-Binet Intelligence Scale (Thorndike, Hagen, & Sattler, 1986); the Bayley Scales of Infant Development (Bayley, 1993); or the Wechsler Intelligence Scale for Children (Wechsler, 1991). Although the three tests tap differing underlying constructs, they each provide the most global assessment of development and thus were entered into a variable termed intellectual functioning. Each test uses a normative mean of 100, but the IQ scores were transformed to z scores for statistical analyses because of differences in standard deviations across the tests.

Procedure

During their children's diagnostic evaluations, caregivers completed the PSI and CAPI, To address concerns about parental literacy associated with lower educational level, caregivers were randomly assigned to one of two groups in which either the caregiver had the examiner administer the measures aloud while she entered her responses on a separate form (n= 18) or she read the measures herself (n = 15). Results of the assessment of the child's adaptive and intellectual functioning were obtained on completion of the diagnostic evaluation.

RESULTS

Preliminary analyses using *t* tests indicated no significant differences on the CAPI Abuse scale or Lie scale; PSI total, parent, or child domain scores; or child's developmental functioning (Vineland or Full Scale IQ) with regard to the respondent's relationship to the child (mother versus other guardian), family composition (one versus two caregivers), or child gender (all *ps* > .05). Similarly, *t* tests detected no significant differences based on the method of administration of measures (self-administered versus examiner administered), indicating adequate readability of the measures. Caregiver age and educational level as well as child age were not significantly correlated with scores on the GAPI, PSI, or child developmental functioning (all *ps* > .05). However, statistical power to detect demographic differences was limited due to sample size.

Children with comorbid behavioral diagnoses (n = 17) attained higher mean PSI parent domain scores *(M*= 144.1, *SD* = 36.2) than those without diagnoses (M= 120.5, SD = 27.3; t(29) = 2.04, *p* .05). Although scores for children with behavioral diagnoses were higher on the PSI child domain *(p*= .27), PSI total *(p*= .15), and CAPI Abuse scale *(p* = .12), the scores were not significantly higher than the group of children without an additional behavioral diagnosis.

For the total sample, children obtained a mean Vineland Composite score of 64.4 *(SD*= 13.5), a mean score indicative of mild deficits in adaptive behavior. Across IQ tests (z-score transformed), the children attained a mean Full Scale IQ score of 68.0 *(SD*= 12.7), a mean score in the range of mild mental retardation.

As seen in Table 1, 33% of the sample scored above the most conservative recommended cutoff score on the CAPI Abuse scale. The current sample mean on the CAPI Abuse scale *(M* = 163.9, *SD* = 101.3) was significantly higher (t(32) = 2.10, $p \leq .05$) than the CAPI's reported subgroup mean of 125 for non-White samples with 12 years or less education (cf. Milner, 1986). In terms of CAPI validity, subjects attained significantly higher mean Lie Scale scores *(M* = 7.9, *SD* = 3.8) than the CAPI's reported subgroup mean of 3.9 for non-White samples with 12 years or less education (*t*(32) = 4.38, $p < .001$). Consequently, approximately half the sample (n = 15) obtained scores indicative of a faking-good pattern.

Results from the PSI total scores indicate that more than 22% of the sample scored at or above the 95th percentile (see Table 1). The obtained sample mean on the PSI total *(M*= 269.5, *SD*= 50.8) was significantly higher than the normative mean of 222.8 (t(30) = 5.12, $p \leq .001$). The sample mean on the PSI child domain

(M= 138.5, *SD*= 24.7) was at or above the 95th percentile and significantly higher than the normative mean of 99.7 (t(32) = 9.04, $p \leq .001$). In contrast, the parent domain score *(M* = 132.7, *SD* = 33.9) was not significantly higher than the normative mean of 123.1 *(p* > .05).

Of the correlations between the PSI and CAPI, the most notable significant relationship was between PSI total scores and the CAPI Abuse scale scores (r = .74, $p \leq .001$; see Table 2). The CAPI Abuse scale scores also correlated significantly with the PSI child and parent domains (r = .48, $p \leq .01$ and r = .70, $p \leq .001$, respectively). Thus, the CAPI Abuse scale was more strongly correlated with the parent domain than with the child domain, although the difference in the magnitude of these correlations was not significant (p > .05). There were no significant correlations between the child's intellectual (z-score Full Scale IQ) or adaptive (Vineland) functioning and any of the PSI scores or CAPI Abuse scale scores *(p* > .05).

TABLE 1: Means, Standard Deviations, and Percentage of Sample Above the Cutoff for the Parenting Stress Index and the Child Abuse Potential Inventory

	Mean	SD	*Percentage Above 95 Percentile*[a]
PSI total stress score	269.5	50.8[b]	22.6
Child domain	138.5	24.7[c]	60.6
Parent domain	132.7	33.9	16.1
Child abuse scale total score	163.9	101.3	33.3
Lie scale score	7.9	3.8[c]	63.3

a. Percentage of sample obtaining scores at or above the 95th percentile.
b. Mean scores at or above the 90th percentile.
c. Mean scores at or above the 95th percentile.

TABLE 2: Pearson Correlations Among the PSI, the CAPI, and Child Developmental Functioning

	PSI Total	*PSI Child*	*PSI Parent*	*CAPI Abuse*	*FSIQ*
PSI child	.82**				
PSI parent	.84**	.57**			
CAPI abuse	.74**	.48*	.70**		
FSIQ[a]	.05	–.08	.08	.02	
Vineland[b]	–.24	–.19	–.04	–.02	.31

NOTE: PSI = Parenting Stress Index; CAPI = Child Abuse Potential Inventory; FSIQ = Full Scale IQ.
a. Correlations based on z-score transformations of the Full Scale IQ scores for the different IQ tests administered.
b. Vineland Adaptive Behavior Scales: Interview edition composite score.
*$p \leq .01$. **$p \leq .001$.

DISCUSSION

The current study examined the generalizability of previous findings about stress and child-abuse-related factors in parents of children with disabilities. Some authors have proposed that, despite significant stressors, families of children with disabilities function well (Gallimore et al., 1993) and do not have increased physical abuse potential (Kirkham et al., 1986). However, prior research has relied primarily on homogeneous samples of Caucasian, middle-income, intact families. In the current study, the PSI and the CAN were administered to a sample of low-income, African American, maternal caregivers of children with developmental disabilities. Results indicated that the current sample evidenced significant parenting stress, particularly stress arising from characteristics of the children. In addition, a considerable percentage of these women obtained scores above the recommended cutoff on the CAPI. These elevated scores on parenting stress and abuse potential measures raise concerns about the appropriateness of the norms for this minority population (see discussion below). CAPI Abuse scale scores were also strongly correlated with parenting stress, particularly those elements of stress related to parent characteristics.

Mothers in the current sample obtained PSI total and PSI child domain scores significantly higher than the normative sample. Thus, stressors in the child domain were especially problematic for this group, whereas the

parent domain score was comparable to the normative sample. Although these findings contrast with those of Krauss (1993), they are consistent with previous findings of high parenting stress, particularly child-related stress, in Caucasian middle-income parents of children with disabilities (Beckman, 1991; Boyce et al., 1991). Higher PSI scores have also been previously reported in low-income African American parents (Arena, cited in Abidin, 1990). In light of the requirements involved in caring for a child with disabilities, it is perhaps not surprising that the child domain scores were particularly elevated.

With regard to child abuse potential, a substantive minority of this sample obtained scores above the recommended cutoff score. The current sample mean was significantly higher than that reported for the GAPI normative subsample of *non-White* parents *with 12 or fewer years of education.* Thus, even when compared to more demographically similar parents, the current sample evidenced higher CAPI scores. Although this finding is consistent with reviews reporting increased incidence of abuse of children with disabilities (Starr et al., 1984), it appears to contrast with one report that Caucasian mothers of children with disabilities obtained median CAPI Abuse scale scores comparable to the normative sample (Kirkham et al., 1986). However, close examination of the results of the Kirkham et al. (1986) study reveals that mean CAPI Abuse scale scores for single mothers of children with disabilities were even higher than those in our sample. Together, these findings underscore the importance of investigating marital status in this research. Raising a child alone appears to consider-ably increase the risk of maltreatment for children with disabilities.

Moreover, half of the present sample obtained CAPI profiles indicating a faking-good pattern. These profiles were retained for final analyses because, as explained in the CAPI manual (Milner, 1986), faking-good profiles serve to reduce Abuse scale scores, and thus elevated Abuse scale scores are meaningful de-spite defensiveness. The current sample scored significantly higher on the Lie Scale than the CAPI normative subsample of non-White parents with 12 or fewer years of education, Interestingly, this pattern did not differ based on whether the measures were self-administered or examiner administered. However, this result does highlight a considerable level of defensiveness in this population.

A strong relationship was found between the PSI total scores and the CAPI Abuse scale scores (r= .74), somewhat higher than previously reported in the literature (r = .62; Talbott, cited in Milner, 1986). This contrasts with one study that did not find a relationship between child abuse potential and a measure designed to assess stress associated with caring for a child with disabilities (Kirkham et al., 1986). Al-though overlap in item content may in part account for the correlation, the magnitude of the relationship suggests that parenting stress is strongly associated with characteristics predictive of physical child abuse. Although both the parent and child domain scores correlated with the CAPI Abuse scale scores, the former held the stronger relationship (although the difference in magnitude was not statistically significant). Thus, although these women were reporting more child-related stress, aspects relating to the mothers themselves were more strongly related to risk for maltreatment. Further research with larger sample sizes may clarify whether child abuse potential is significantly more strongly correlated with parent-related aspects of stress than with child-related features, Results from the current sample indicated that parenting stress and child abuse potential were unrelated to the child's adaptive or intellectual functioning, despite some researchers' suggestion that severity of disability may be related to increased stress and maltreatment (Starr et al., 1984; Westcott, 1991). This issue may be more complicated than a simple linear relationship and requires further study to evaluate the role of parental expectations (see Westcott, 1991), Parents of children with severe, obvious impairments may more readily adjust their expectations and consequently experience less stress. In contrast, some parents whose children have more marginal, less obvious disabilities (borderline intellectual functioning) may have difficulty developing clear, appropriate expectations for their children; thus, these parents may experience more stress and increased potential for abuse. A study comparing two such groups of parents may clarify how severity of disability may interact with parental expectations to influence parental stress and physical abuse risk.

Demographic characteristics, such as child gender or age, maternal age, maternal education, and single-parent status, were unrelated to parenting stress or child abuse potential in this sample. However, sample size limited the statistical power to detect demographic differences and requires further investigation. The current study also

involved a heterogeneous sample of children with a variety of developmental delays and ages, which may have influenced the findings. With regard to comorbid diagnoses, caregivers of those children with behavioral or emotional problems scored higher parent domain scores. Difficult behavior has previously been suggested to exacerbate stress in parents of children with disabilities (Gallagher et al., 1983).

The current study points to several important directions for future research. Most imperative is the need for studies involving samples with demographic characteristics similar to those in the present study grouped into those with versus without a child with disabilities. Such a design could resolve whether, regardless of disability status, parents in this demographic group obtain similarly high parenting stress and child abuse potential scores. The implications are obvious and serious with regard to the continued and prevalent use of these measures that may overestimate stress and abuse potential in this population. Moreover, such a research design would clarify whether parenting stress accounts for more variance in child abuse potential in those parents of children with disabilities.

Overall, the current study indicates that this sample of low-income African American maternal caregivers may be experiencing considerable parenting stress and endorsing more abusive attitudes toward their children with developmental disabilities. Further research should clarify if these elevated profiles reflect cross-cultural differences in responding. Additionally, an examination of the scores obtained by this sample indicates considerable variability, underscoring the need for continued investigation of those factors that exacerbate stress and abuse risk. Clearly many poor, African American maternal caregivers seem to manage well in raising a child with disabilities--many of them on their own—and understanding which factors facilitate these parents' adjustment is essential.

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